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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,226 | 12/09/2003 | Philip L. Lundman | 062021-9015-01 | 4922 |
| 23409 | 7590 | 06/15/2004 | EXAMINER | |
| MICHAEL BEST & FRIEDRICH, LLP 100 E WISCONSIN AVENUE MILWAUKEE, WI 53202 | | | BRINSON, PATRICK F | |
| | | | ART UNIT | PAPER NUMBER |

3752

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|---|--|
| Office Action Summary | Application No. 10/731,226 | Applicant(s) LUNDMAN, PHILIP L. CFO | |
| | Examiner Patrick F. Brinson | Art Unit 3752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-28 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/12/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter recited in claims 8 and 16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 22 is objected to because of the following informalities: Claim 22 recites "the saddle" without proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-12 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,901,752 to **Lundman** in view of U.S. 4,514,447 to **Boxmeyer**.

The **Lundman '752** reference discloses an apparatus for stopping an inflatable apparatus for sealing a pipeline including a support member having first (23) and second (43) ends, and an outer surface. An inflatable bladder (47) is disclosed sealingly engaging the first and second ends of the support member and substantially covering the outer surface of the support member. Col. 6, last paragraph, discloses the inflatable bladder (47) preferably constructed of an elastomeric, gas-impermeable

material that exhibits increased flexibility and expandability. Inflatable sleeve (47) is constructed of nylon with a polyurethane coating. An outer material layer (51) is disclosed substantially encasing the inner inflatable bladder and sealing engaging the first and second ends of the support member. Col. 8, lines 2-6 disclose that the outer layer material (51) is preferably constructed to have physical properties such as high strength, wear resistance, puncture resistance, temperature resistance, chemical compatibility and ultra-violet radiation resistance. An inflation hose (41) for supplying pressurized fluid between the outer surface of the support member and the inner inflatable bladder. The apparatus also includes a middle sleeve (49) formed of a ballistic nylon material. First and second bands (63) are positioned around the inner inflatable bladder and the outer material layer to sealingly engage them with the first and second ends of the support member, as recited in claim 9. The support member includes a longitudinally extending bore (45) to provide a fluid bypass through the apparatus, as recited in claims 10 and 12. Support member comprises a first high strength pipe (21) positioned at the end of the support member and a second high strength pipe (43) positioned at a second end of the support pipe, flexible hose (45) connecting first and second high strength pipes, as recited in claim 11. Fig. 5 discloses the method step of tapping the pipeline downstream of where the bladder is to be inflated, providing a vertical pipe stub (215) that supports a transverse pipe (237) for supplying the pressurized fluid to inflate the bladder. **Lundman '752** does not

disclose the outer material being capable of withstanding inflation pressures of approximately 100 psi. The patent to **Boxmeyer** discloses an inflatable structural bladder for the repair of a pipeline that is of substantially tubular shape. Col. 2, lines 55 and 56 discloses the outer layer of tubular body (102) covered by a filament core (202). The filaments preferably comprise Kevlar "49" brand aromatic polyamide fibers. Cols. 5 and 6 disclose that the material is capable of withstanding inflation pressures from 30 to 150 psi. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the inner and/or outer layer of **Lundman '752** to include a rubberized Kevlar fabric material, as suggested by **Boxmeyer** in order to pressurize the bladder with high inflation pressures of up to 100 psi, wherein Kevlar is known as a high strength fabric material.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lundman** in view of **Boxmeyer** as applied to claims 1 and 10 above, and further in view of U.S. 4,614,206 to **Mathison et al.**

The patent to **Lundman**, as modified, does not disclose a plurality of straps included in the outer material layer for reinforcing the outer layer. The patent to **Mathison et al.** discloses an expansible plug device including an inflatable bladder (13) including a plurality of reinforcing cording strands or straps (57) provided within the layer. Fig. 5 also discloses the device including a bow stiffener (31) through which bypass fluids flow. It would have been obvious to one having ordinary skill in the art

at the time the invention was made to provide to the outer layer of **Lundman**, as modified, a plurality of reinforcing cords or straps as suggested by **Mathison et al.** in order to further assist the inflation bladder in burst resistance and to aid in withstanding the high pressures of the inflation fluid.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lundman '752** in view of **Boxmeyer** as applied to claim 1 above, and further in view of U.S.4,995,761 to **Barton**.

The patent to **Lundman**, as modified, does not disclose a curable material patch positioned on the outer layer to be forced against a rupture in the pipeline. The patent to **Barton** discloses a method and apparatus for repairing ruptures in underground conduits including providing an inflatable bladder member (52) over which is provided curable material patch or sleeve (72). Fig. 3 discloses the match being dipped into a bonding substance, and fig. 4 discloses the inflated bladder pressing the material patch against rupture (30), after which the bladder is deflated and removed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide to the inflatable bladder of **Lundman**, as modified, a curable material patch, as suggested by **Barton** wherein it is known in the art to apply curable patches to pipeline ruptures with inflatable bladder devices.

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6. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lundman** in view of **Lange** as applied to claim 19 above, and further in view of US 4,291,727 to **Yie et al.**

The patent to **Lundman**, as modified, discloses the method steps of plugging a high pressure pipeline, as discussed in preceding paragraph #3, but does not disclose the use of a saddle. The patent to **Yie et al.** discloses a pipeline flow restrictor and process, including the step of providing a saddle (56) downstream of the rupture, the saddle including cylinder (57) extending therefrom for threadable engagement with the threads in the lower end of adapter cylinder (39) that extends transverse to the saddle, as recited in claims 21 and 22. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the pipe stub of **Lundman**, as modified, a pipe saddle, as suggested by **Yie et al.** in order to provide an alternative method of supporting a transverse pipe for supplying pressurized air to the bladder.

Allowable Subject Matter

7. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

8. Claims 23-28 are allowed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Yie et al. '721, Riegel et al., Lange, Josien et al., Jones, Carter, Jr. '754 and '649 are all pertinent to Applicant's invention in disclosing expandable bladder devices for plugging pipelines.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (703) 308-0111. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick F. Brinson
Primary Examiner
Art Unit 3752

P. F. Brinson
June 12, 2004